

Industrial and Domestic Water Supply Dams for Mumbai:

No EIA, No public hearings, No clearances, No monitoring: They are BENIGN DAMS!

Northern part of the global biodiversity hotspot of Western Ghats is a relatively lesser studied region in terms of ecology. Nonetheless, it is home to some rare, endangered and endemic species as well as tribal populations in districts like Raigad, Thane and Nashik (in Maharashtra) and Dangs in Gujarat. Murbad region of Thane has been listed as a Proposed Ecologically Sensitive Area because of its biodiversity, proximity to Tansa Wildlife Sanctuary and 'high number of threatened species'¹. The Western Ghat region of Thane district comes almost entirely under the Tribal Sub Plan (TSP or the Integrated Tribal Development Program), especially talukas like Murbad, Shahpur, Jawhar and Wada. According to the [Ninth Five Year Plan \(1997-2002\)](#), one of the reasons for this focused effort was, 'Post-independence, the requirements of planned development brought with them dams, mines, industries and roads – all located on tribal lands. With these came the concomitant processes of displacement, literal and metaphorical. Tribals found themselves at a profound disadvantage in the face of an influx of better-equipped outsiders into tribal areas. The repercussions for the already fragile socio-economic livelihood base of the tribals were devastating – ranging from loss of livelihoods, land alienation on a vast scale, to hereditary bondage.'

Apart from the funds invested by the government in various tribal development schemes in this area, many organisations like Shramik Mukti Sangathan and Van Shakti have been working for many years with the tribal population addressing issues like education, land rights and health care. There are a number of protected areas and reserved forests in this area, like the Tansa Sanctuary. The region also has a rich tradition of community conservation, with numerous *Dev Rais* (Sacred Groves), *Devachi Zaade* (Sacred Trees), a temple fish sanctuary (documented, there can be a number of such sanctuaries, undocumented) which protects endangered Mahseer. Wada region alone has 7 'Prioritised Sacred Groves' and Wada, Jawhar and Murbad region has been marked as Protected Area Buffer and proposed Ecologically Sensitive Area (ESA)



by Bharati Vidyapeeth's Report submitted to the Western Ghat Expert ecology Panel.

All in all, this is a region rich in biodiversity, housing some of the last relics of majestic Western Ghat Forests, providing innumerable ecological goods and services to Mumbai including water supply, erosion control (reservoirs like Bhatsa, Tansa, Barvi, Morbe, Modak Sagar and Upper Vaitarana), regulating micro climates, supplying timber and non timber forest produce, herbal medicines, etc. It is home to a number of tribes which are entirely dependent on the forest and its ecological balance to sustain them. A number of tourism initiatives have made this area a popular trekking and weekend destination for the urban Mumbaikars.

It is obvious that such a region would be protected and valued for the benefit of current and future generations of Mumbai as well as the tribal *padas*. In reality, something very different is happening here. More than eight large dams have been planned in this region in the tribal belt and dense Western Ghat Forests of Thane and Raigad Districts. These dams, which will affect a minimum of 25000 people (mostly tribals) and submerge thousands of hectares of Prime forests, agricultural and residential lands do not require any environmental clearance and involve no public hearing, no Environment Impact Assessment². We will not even know what has been the impact of such a massive scale of infrastructure on tribal populations and their forest.

We present a brief status of some of the upcoming dams and the extent of irregularities involved in the process:

Kalu Dam The Kalu dam site is situated in the TSP area of Murbad Tehsil in Thane District. This dam, with a storage capacity of 407.99 MCM will submerge an area of 2100 ha, including about 1000 ha of forest land. (Photo (all photos by author) **Above:** Illegal work on Kalu Dam Foundation Excavation).

Various Irregularities in Kalu Dam Although the project does not have Forest Clearance, work has already started on what they refer to as 'non Forest Land' (which is forested Adivasi land).

On January 6, 2011, The Forest Conservation Division of the MoEF issued a circular revising para 4.4 of the Guidelines on the Forest (Conservation) Act, 1980

¹ Bharucha et al, 2010, [Current Ecological Status and Identification of Potential Eco-sensitive Areas \(ESA\) in Northern Western Ghats](#), Bharati Vidyapeeth's Institute of Environment Education and Research (BVIEER)

² If they do not submerge part of the Protected Area

regarding projects involving forest as well as non forest lands. According to 21 March 2011 circular issued by the MoEF, the original guideline has been strengthened and which is now in force (since March 2011 and also before that) says: **"If a project involves forest as well as non forest land, work should not be started on the non forest land till the approval of the government for release of forest land under the FCA 1980, has been given. This fresh circular has been issued, "to avoid further mischievous interpretation". The ongoing work on Kalu Dam blatantly defies the legal stipulation in this circular.**

Letter from local people from the Kalu dam area, Shramik Mukti Sangathana and SANDRP have been sent to the Forest Advisory Committee regarding this matter on the 30th May 2011 and subsequently. We have not received any response yet.

The project authorities claim that the contractor has undertaken only 'Ancillary' activities as they have yet to receive Forest clearance. These Ancillary activities include only temporary work, they claim. However, the contractor and Project proponents have already caused massive deforestation and destructive excavations. Such destruction of forest without the Forest Clearance is also illegal and in violation of the FCA. Levelling work is on going with more than 30 dozers and 100 JCBS on the site, plying incessantly.

- A huge foundation excavation for the dam is ongoing.
- A guest house for Project officers, staff and contractors has been constructed , which is a lavish structure fitted with AC and LCD TV sets
- Ironically, though the scope of 'Ancillary Works' include shelter for dam workers, at Kalu the workers and their children sleep in the river bed (which is dangerous and illegal), while the CRPF police force, installed at the site for months, reside in rooms.
- The non forest land on which this excavation and levelling is continuing belong to Adivasis. No legal process of acquisition has even been started regarding

these or any other lands which need to be acquired for this project.

Since there have been no EIAs, no Environmental Clearance, no Public Hearing, local peoples voice remains unheard even on paper.

The entire area to be submerged and affected by Kalu Dam is a **TSP-Scheduled Area**. The provisions of PESA (Panchayats Extension in Schedule Area) Act require informed consent from Gram Sabhas for this project. **No such consent has been given by any Gram Sabhas. Most of the Gram Sabhas have resolved to resist this project. Thus the ongoing construction of this dam also amounts to Violation of the PESA Act.**

The submergence area of Kalu Project includes about **1000 ha of forest land**. The area is inhabited by Scheduled Tribes and other traditional Forest Dwellers who depend entirely on the Forest land and resources for their bona fide livelihood needs. Many of these tribals and traditional Forest Dwellers have filed Individual Cultivation Rights claims under the 'Scheduled Tribes and other Traditional Dwellers (Recognition of Forest Rights) Act 2006 (FRA). Further, about 20-25 hamlets/ villages have their community forest rights in this forest in the form of food gathering, collection and sale of minor forest produce like Bamboo, Mahua, Mangoes, Karwandas, Tendu leaves, cashews, gum, firewood, etc. They also depend on this forest for herbal medicines. Most of these have not been documented or settled yet.

The 2006 FRA, Section 4 (5): **"No member of a forest dwelling scheduled tribes or other traditional forest dwelling communities shall be evicted or removed from forest land under his occupation till the recognition and verification process under this act is complete."** Therefore the ongoing work on Kalu dam is a violation of the FRA also. The Katkari, Thakur and Mahadev Koli Tribes have more than 20 traditional worship places in this forest area and there are many sacred groves and trees associated with these places.

Overview of the status of on-going and planned dams for supplying water to Mumbai and suburbs

Dam	District	Storage Cap, MCM	Submergence Area, Ha	Forest Area affected, Ha	Population affected	Environmental clearance required?
Kalu	Thane	407.99	2100	999	3169	No
Shai	Thane	348 (Planned Utilisation PU)	Not available	43000 trees to be cut	5124	No
Middle Vaitarna	Thane	172 (PU)	3473 ³	760 (over 100000 trees cut)	Eight villages (minimum 1600 people)	Yes, submerging part of Tansa Wildlife Sanctuary. Cleared
Balganga	Raigad	127.76 (PU)	1240	265	<u>8000</u>	No
Gargai	Thane	180 (PU)	NA	NA	NA	Yes, affecting part of Tansa WS
Pinjal	Thane	425 (PU)	NA	NA	NA	Yes, affecting part of Tansa WS
Barvi	Thane	250 (PU)	NA	1214 (news reports)	3375	No

(All Planned Utilisation Figures from: [MMRDA Regional Plan for Mumbai Metropolitan Region 1996-2011](#))

³ Bombay Community Public Trust: Understanding our civic issues: Mumbai's Water Supply

The lands and forests also act as grazing grounds for cattle and goats. Fish from the streams and river are an important source of protein for these tribals.

The project contractor has already clear felled thousands of trees near the dam site without seeking permission even from the Regional Forest Department. After repeated agitations by Shramik Mukti Sangathana, the local Forest officials confiscated one JCB, one Dumper and more than 3000 cubic meter of Timber. But this is just a small fraction and the felling is continuing in the absence of any strong action by the Forest Department, or any other Department.

Shai Dam Shai Dam is being built adjacent to Kalu Dam, on the river Shai. Shai envisages submerging nearly 495 ha of forest land, chopping of more than 42000 trees, affecting 20 villages and a population of more than 5000.

Under The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, tribals and forest dwellers in Shai have legitimate community and individual rights over the forest, which are yet to be ascertained and recorded. Without this process and settlement of these claims, it will be illegal to divert (clear fell, in this case) their forest land. Grampanchayats of Shai have written a letter to this effect to the Chief Conservator of Forests, Thane, nearly a year back. Villagers have been filing these claims for the past few months & the process is far from complete.

No clearance has also been taken for the tree felling non forest land with tree cover as required under the Supreme Court orders. There is considerable tree cover even in non-forest lands of Shai, which would require Forest Clearance, but this has not been obtained.

Unfortunately, the FAC has already recommended Shai Project for Forest Clearance. In a letter dated 30th May 2011, Shramik Mukti Sangathana, Shai Dharan Virodhi Shetkari Sangharsha Samiti and SANDRP have written to the FAC to cancel this approval. Shai Dharan Virodhi Shetkari Sangharsh Samiti is an apex body of villages affected by the dam. All the 10 Gram panchayats representing the 20 villages affected by Shai have passed resolutions against the dam for three consecutive years.

Balganga Dam Balganga Dam has been planned by CIDCO (City and Industrial Development Corporation) in Pen taluka of Raigad to supply 350 MLD water to the expanding suburbs of Navi Mumbai. Nearly 13 villages with a pre-dominant tribal population will be severely

affected by the project. The project work has already begun and is likely to submerge around 1,240 ha land of which 602 ha comprises paddy fields with 265 ha marked as forest land. Livelihoods of over 8000 people will be affected by this dam.

Local people are against the dam and it is reported that till now CIDCO has been successful in convincing only 70 people of the 8000 affected to sign up for the compensation package. Though CIDCO claims that this 350 MLD water is for drinking water purposes for the suburbs of Navi Mumbai, there are reports that the water will be used for Navi Mumbai Special Economic Zone (NMSEZ). "The govt recently sanctioned 400 MLD water from Balganga River for the NMSEZ project as a permanent source of water." (DNA 011210). The [2008 Expert Committee Meeting on Infrastructure Projects](#) also

notes in its minutes "Water requirement for the project (NMSEZ) is 795 MLD which will be sourced from Balganga Dam on River Balganga and MJP water works on Patalganga, Morbe Dam of NMMC & Hetawane Dam."

Nearly 70% work on the Balganga is now complete, with no Forest Clearance, which as discussed earlier, is illegal. As is the case with other dams,

Balganga also does not require any Environmental Clearance, EIA or Public Hearing.

Barvi Dam Displaced for the fourth time Height of the Barvi dam was raised from the original 38.1 m to 44.7m in 1979, to 52m in 1985, to 66.5m in 1999, and now is being raised to 72m this year.⁴

This is to enhance the total storage capacity from 174 million cubic metres (MCM) to 347 MCM to supply water to civic bodies of Thane, Navi Mumbai, Kalyan-Dombivili, Ulhasnagar, Bhiwandi-Nizampura, and Mira-Bhayander. This time over, the 3375 people will be displaced according to the Superintendent Engineer of MIDC. No Environmental Clearance has been obtained. More than 3000 acres of forest will be submerged.

Middle Vaitarna Dam (Photo above is of the valley that will be submerged by the dam.) Middle Vaitarna Dam is coming up on the Vaitarna River between the Upper Vaitarna and Modak Sagar dams. FAC has cleared diversion of 760 ha of prime forest in the region. Locals say that in reality forests on a much larger scale have been cut, not only in the submergence zone, but also in the catchment. Middle Vaitarna had received Environmental Clearance. According to Thane's



⁴ [How to Kill an Ecosystem, DNA, World Environment Day Special](#)

Honorary Wildlife Warden Punam Singvi, **more than One Lakh Trees have been cut for this project.** Compensatory afforestation for this irreplaceable Western Ghats forest is planned in Beed, a drought-prone district in Vidarbha, 374 kms from here.

Gargai and Pinjal Dams Gargai and Pinjal Dams are planned across respective rivers, tributaries of Vaitarna, in the Wada Taluka of Thane District⁵. According to dam officials, these dams will come up in forest area. "Due to the vast forest cover, we will have to carry out deforestation on a large scale for building the dam and it will require a go-ahead even from the Central ministry of environment and forest. *If the paperwork gets delayed then the project too will get delayed*" says Chief Engineer, Civic Water Supply Projects Department, A. Pednekar. He also said that though the exact dam location has not been finalised, the actual dam site will be in the forest area and a significant portion of a wildlife reserve sanctuary will be affected⁶.

The shocking state of affairs where these projects do not even require impact assessments or mitigation plans is due the serious anomalies in the EIA notification 2006. The Sept 14, 2006 EIA notification lists "LIST OF PROJECTS OR ACTIVITIES REQUIRING PRIOR ENVIRONMENTAL CLEARANCE" under a schedule defined in the Notification. Section 1(c) of this schedule is for River Valley projects. This section includes only hydro projects above 25 MW and irrigation projects.

Without getting into the debate of how much Mumbai needs this water and what has it done in the past to protect its water sources and rivers from pollution and encroachment and by way of demand side management, rainwater harvesting and curbing non essential uses, it is assumed that when such a large scale infrastructural activity is taking place, affecting more than 25000 people from vulnerable communities and submerging thousands of hectares of forest from a global biodiversity hotspot, all the possible environmental and social checks will be strenuously put in place. However, it has been seen that the most primary environmental governance mechanisms like Environmental Clearance which includes Environment Impact Assessment and Public Hearing is not taking place.

In dams where Protected Areas are also being submerged, officials are looking at Environmental Clearance as hurdles, which need to be 'fast tracked'. Indeed, it has been reported that Gargai and Pinjal

Dams are on 'Fast track'. In fact the ministers and senior officials have no problems telling the journalists that when you want to reach some place fast, you need to jump some signals, admitting that they have already indulged in violations.

Even as the work on Middle Vaitarna dam proceeds 24X7, it is having a huge negative impact on the wildlife of the region. In Feb 2010, a [Leopard mother abandoned her two cubs at the dam site and did not return, presumably disturbed by the sound & activity near the region.](#)

Compare this with what was included in the EIA notification before 14.09.2006 under River Valley Projects: "River Valley projects including hydel power, major Irrigation and their combination including flood control." Thus, till 14.09.2006 all large dams and river related projects required environment clearance and hence EIA-EMP and also public hearings. However, after 14.09.2006, following categories of dams and river related projects got excluded from the EIA notification:

1. All Dams not meant for irrigation or having hydro installed capacity below 25 MW. (The authors of the notification seem like illiterates on environment issues, since this excludes say the 20 MW Gumti dam on Tripura having massive submergence area of 4634 ha. They do not seem to realize that the installed capacity of hydro power does not decide the quantum of impacts.)
2. All drinking water dams
3. All Industrial water dams
4. All flood control dams or embankment projects.

These are shocking exclusions, since all these projects have massive impacts, both socially and environmentally. Like the massive dams for Mumbai, controversial Renuka dam in Himachal too would not have required EIA, PH and EC if it were not affecting a portion of the Renuka sanctuary. Similarly, the embankment projects related to Polavaram project in Orissa and Chhattisgarh do not require EIA, PH and EC, the CWC and AP govt has argued. There are several such examples one can give.

A number of letters have been sent by dam affected communities, local organisations and SANDRP to the Union Minister, National Advisory Council, Forest Advisory Committee, Western Ghats Expert Ecology Panel as well as the local Collector, Forest officers, etc. We have received no response yet.

As we listen attentively and justify the needs of Mumbai, are we also need to listen to our life support systems, vulnerable communities, climate change concerns and future generations?⁷

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⁵ For more details: www.sandrp.in/drp/DRP_Feb_2011.PDF

⁶ [Indian Express 261210](#)

⁷ News reports on the issue: governancenow.com, www.dnaindia.com/mumbai/report_barvi-dam-how-to-kill-an-eco-system_1551249-all, www.countercurrents.org/jadav110311.htm, www.dnaindia.com/mumbai/report_maharashtra-s-kalu-dam-lies-on-bed-of-faults_1551660, www.dnaindia.com/mumbai/report_is-environment-ministry-nod-needed-for-project-on-kalu-river_1558418